

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

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|                                                            |                                                                                                                                                         |                                                                |
|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Applicant's or agent's file reference<br><b>T8466294W0</b> | <b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. |                                                                |
| International application No.<br><b>PCT/CA 01/ 00237</b>   | International filing date (day/month/year)<br><b>01/03/2001</b>                                                                                         | (Earliest) Priority Date (day/month/year)<br><b>01/03/2000</b> |
| Applicant<br><b>SPICER CORPORATION et al.</b>              |                                                                                                                                                         |                                                                |

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

1  
☐ None of the figures.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA 01/00237

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H04L12/24 H04L29/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04L G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages                                                                                                                                                                                                                                                                                                                                                                                                  | Relevant to claim No. |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| X          | WO 99 22294 A (C C C GROUP PLC)<br>6 May 1999 (1999-05-06)<br>page 3, line 18 -page 6, line 2<br>---                                                                                                                                                                                                                                                                                                                                                                                | 1-10                  |
| A          | SITAO W ET AL: "USING DEVICE DRIVER<br>SOFTWARE IN SCADA SYSTEMS"<br>2000 IEEE POWER ENGINEERING SOCIETY.<br>WINTER MEETING. CONFERENCE PROCEEDINGS.<br>SINGAPORE, JAN. 23-27, 2000, IEEE POWER<br>ENGINEERING SOCIETY WINTER MEETING, NEW<br>YORK, NY: IEEE, US,<br>vol. 3 OF 4,<br>23 January 2000 (2000-01-23), pages<br>2046-2049, XP000967795<br>ISBN: 0-7803-5936-4<br>page 2046, right-hand column, paragraph 3<br>-page 2047, right-hand column, paragraph 1<br>---<br>-/-- | 1-10                  |



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*&amp;\* document member of the same patent family

Date of the actual completion of the international search

13 November 2001

Date of mailing of the international search report

20/11/2001

Name and mailing address of the ISA

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NL - 2280 HV Rijswijk  
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Authorized officer

Veen, G

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA 01/00237

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|------------|-------------------------------------------------------------------------------------|-----------------------|
| A          | US 5 987 611 A (FREUND GREGOR)<br>16 November 1999 (1999-11-16)<br>claim 1<br>----- | 1-10                  |

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/CA 01/00237

| Patent document<br>cited in search report |   | Publication<br>date | Patent family<br>member(s) | Publication<br>date |
|-------------------------------------------|---|---------------------|----------------------------|---------------------|
| WO 9922294                                | A | 06-05-1999          | AU 9752798 A               | 17-05-1999          |
|                                           |   |                     | CN 1277687 T               | 20-12-2000          |
|                                           |   |                     | EP 1025490 A1              | 09-08-2000          |
|                                           |   |                     | WO 9922294 A1              | 06-05-1999          |
| <hr/>                                     |   |                     |                            |                     |
| US 5987611                                | A | 16-11-1999          | NONE                       |                     |
| <hr/>                                     |   |                     |                            |                     |

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
US Department of Commerce  
United States Patent and Trademark  
Office, PCT  
2011 South Clark Place Room  
CP2/5C24  
Arlington, VA 22202  
ETATS-UNIS D'AMERIQUE  
in its capacity as elected Office

Date of mailing (day/month/year)

20 November 2001 (20.11.01)

International application No.

PCT/CA01/00237

Applicant's or agent's file reference

T8466294WO

International filing date (day/month/year)

01 March 2001 (01.03.01)

Priority date (day/month/year)

01 March 2000 (01.03.00)

Applicant

SPICER, Steven et al

1. The designated Office is hereby notified of its election made:



in the demand filed with the International Preliminary Examining Authority on:

28 September 2001 (28.09.01)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Paulette BOCCARD (Fax 338.87.40)

Telephone No.: (41-22) 338.83.38

PCT

REC'D 09 AUG 2002

INTERNATIONAL PRELIMINARY EXAMINATION REPORT <sup>F</sup>

(PCT Article 36 and Rule 70)



|                                                                                           |                                                          |                                                                                                                               |  |
|-------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--|
| Applicant's or agent's file reference<br>T8466294WO                                       |                                                          | <b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) |  |
| International application No.<br>PCT/CA01/00237                                           | International filing date (day/month/year)<br>01/03/2001 | Priority date (day/month/year)<br>01/03/2000                                                                                  |  |
| International Patent Classification (IPC) or national classification and IPC<br>H04L12/24 |                                                          |                                                                                                                               |  |
| Applicant<br>SPICER CORPORATION et al.                                                    |                                                          |                                                                                                                               |  |

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 5 sheets, including this cover sheet.
  - ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 3 sheets.

- This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

|                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Date of submission of the demand<br><br>28/09/2001                                                                                                                                                                                                                                                                                | Date of completion of this report<br><br>08.08.2002                                                                                                                 |
| Name and mailing address of the international preliminary examining authority:<br><br> European Patent Office - P.B. 5818 Patentlaan 2<br>NL-2280 HV Rijswijk - Pays Bas<br>Tel. +31 70 340 - 2040 Tx: 31 651 epo nl<br>Fax: +31 70 340 - 3016 | Authorized officer<br><br>Veen, G<br><br>Telephone No. +31 70 340 3811<br><br> |

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/CA01/00237

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

1-19 as originally filed

**Claims, No.:**

1-10 with telefax of 04/04/2002

**Drawings, sheets:**

1/5-5/5 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/CA01/00237

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

|                               |      |        |      |
|-------------------------------|------|--------|------|
| Novelty (N)                   | Yes: | Claims | 1-10 |
|                               | No:  | Claims |      |
| Inventive step (IS)           | Yes: | Claims | 1-10 |
|                               | No:  | Claims |      |
| Industrial applicability (IA) | Yes: | Claims | 1-10 |
|                               | No:  | Claims |      |

2. Citations and explanations  
**see separate sheet**



The following document is referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D2: SITAO ET AL: "USING DEVICE DRIVER SOFTWARE IN SCADA SYSTEMS",  
2000 IEEE POWER ENGINEERING SOCIETY, WINTER MEETING.  
CONFERENCE PROCEEDINGS. SINGAPORE, JAN. 23-27, 2000.

**Re Item V**

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1.1 Claim 1**

The closest prior art, represented by D2, discloses a system for organizing device driver software in SCADA (Supervisory Control And Data Acquisition) systems, whereby the software is divided into three layers. The middle one of these contains the device driver software and creates a uniform interface via which the client terminals can access the different devices ("resources", using the terms of the present application) below.

It does not disclose, however, a reconfigurable driver application for each terminal which is configured in accordance with the particular resource selected by the terminal and controlled by an authorization server, as defined in independent claim 1. These features solve the problem of how to achieve easy and quick resource access control, unhampered by changes in device type and resource network address.

Therefore, the system defined in claim 1 is not obvious, and claim 1 satisfies the requirements of Articles 33(2) and 33(3) PCT.

**1.2 Claims 2-5**

Claims 2-5 are dependent on claim 1 and therefore also meet the requirements of Articles 33(2) and 33(3) PCT.

**1.3 Claim 6**

Claim 6 defines the method implemented by the system of claim 1 and therefore also meets the requirements of Articles 33(2) and 33(3) PCT.

**1.4 Claims 7-10**

Claims 7-10 are dependent on claim 6 and therefore also meet the requirements of Articles 33(2) and 33(3) PCT.

**Re Item VII**

**Certain defects in the international application**

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in D2 is not mentioned in the description, nor is D2 mentioned in the description.

Contrary to the requirements of Rule 6.2(b) PCT, the technical features mentioned in the claims are not followed by reference signs relating to those features.

Contrary to the requirements of Rule 6.3(b) PCT, the claims have not been cast in the two-part form, with those features which in combination are part of the prior art (see D1) being placed in the preamble.

**Re Item VIII**

**Certain observations on the international application**

The last paragraph of the description ("The foregoing description ...") implies that the subject-matter for which protection is sought may be different from that defined by the claims, which results in lack of clarity of the claims (Article 6 PCT) when used to interpret them.

## WE CLAIM:

1. A network resource access system for providing network terminals with access to network resources over a network, the network terminals each including a reconfigurable driver application, the driver application comprising a network resource driver for facilitating communication of application data with one of the network resources, a driver administrator for receiving resource data associated with the one network resource, and a data transmitter in communication with the driver administrator and an output of the resource driver and configured to transmit the application data over the network to the network resource in accordance with the received resource data, the network resource access system comprising:
  - a resource registry including resource records associated with the network resources, the resource records defining configuration data for each said network resource; and
  - an authorization server in communication with the resource registry and being configured to receive from one of the network terminals a request to communicate with a selected one of the network resources, and to configure the driver application of the one network terminal for communication with the selected one network resource in accordance with a correspondence between the resource configuration data and a configuration parameter associated with the one network terminal.
2. The network resource access system according to claim 1, wherein the configuration data includes a user access level, and the authorization server is configured to configure the driver application of the one network terminal in accordance with a correspondence between the configuration parameter of the one network terminal and the user access level associated with the one network resource.
3. The network resource access system according to claim 2, wherein the configuration parameter comprises at least one of a network address associated with the one network terminal, and a username associated with a user of the one network terminal.
4. The network resource access system according to claim 2, wherein the resource records define

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a network address associated with each said network resource, and the authorization server is configured to configure the driver application of the one network terminal with the respective network address.

5. The network resource access system according to claim 3, wherein the authorization server is configured to establish a secure communications channel with the one network terminal, and to provide the driver application of the one network terminal with the respective network address over the secure communications channel.

6. A method for providing network terminals with access to network resources over a network, the method comprising the steps of:

receiving a request from one of the network terminals for communication with one of the network resources;

obtaining resource configuration data associated with the one network resource; and

configuring the one network terminal for communication with the one network resource in accordance with a correspondence between the resource configuration data and a configuration parameter associated with the one network terminal.

7. The method according to claim 6, wherein the resource configuration data includes a network address associated with the one network resource, and the configuring step comprises providing the one network terminal with the network address.

8. The method according to claim 7, wherein the configuring step comprises the steps of establishing a secure communications channel with the one network terminal, and providing the one network terminal with the network address over the secure communications channel.

9. The method according to claim 6, wherein the resource configuration data includes a user access level, and the configuring step comprises providing the one network terminal with the network address in accordance with a correspondence between the configuration parameter of the one

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network terminal and the user access level associated with the one network resource.

10. The network resource access system according to claim 9, wherein the configuration parameter comprises at least one of a network address associated with the one network terminal, and a username associated with a user of the one network terminal.